Data Validation Checklist
Semivolatile Organic Analyses

Project:	35TH Avenue Superfund Site	Project No:	15268508.20000
Laboratory:	TestAmerica - Savannah, GA[1]	Job ID.:	680-87496-4
Method:	SW-846 8270C Low-Level (PAH)	Associated Samples:	Refer to **Attachment A** (Sample Summary)
Matrix:	Soil	Samples Collected:	02/13/2013
Reviewer:	Karen Marie Trujillo	Date:	03/06/2013
Concurrence[2]:	Nicole Lancaster/Martha Meyers-Lee	Date:	03/28/2013

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
1. Were sample storage and preservation requirements met? If temperature >6°C, then J/UJ-flag results.	✓				
2. Were all COC records signed and integrity seals intact, indicating that COC was maintained for all samples?	✓				
3. Were there any problems noted in laboratory data package concerning condition of samples upon receipt?		✓			
4. Do any soil samples contain more than 50% water? If yes, then results are to be reported on a wet-weight basis.		✓			
5. Were holding times met (≤7 and 14 days from collection to extraction for aqueous and solid samples, respectively; ≤40 days from extraction to analysis)? If not, then J/UJ-flag sample results. If grossly (2x) exceeded, then flag J/R.	✓				
6. Were results for all project-specified target analytes reported?	✓				
7. Were project-specified Reporting Limits achieved for undiluted sample analyses?	✓				
8. Were samples with analyte concentrations exceeding the calibration range of the instrument re-analyzed at a higher dilution? If not, then J-flag sample result.		✓			
9. Was a method blank extracted with each batch (i.e., one per 20 samples, per batch, per matrix and per level)?	✓				
10. Were target analytes detected in the method blank?		✓			
11. Were target analytes detected in equipment/rinsate blanks?		✓		PAHs were not detected during the analysis of rinsate blank 021213-RB-Shovel (680-87747-31).	

[1] All analytical work subcontracted to TestAmerica of Tampa, FL
[2] Independent technical reviewer

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
12. Are equipment/rinsate blanks associated with every sample? If no, note in DV report.		✓		According to the QAPP, a rinsate blank is to be collected after each decontamination event, which occurs once per week per the client. A rinsate blank, 021213-RB-Shovel (680-87747-31) was collected during the week of 02/11/12. The rinsate blank was analyzed for PAHs under Test America Job ID 680-87747-2.	
13. Were analytes detected in samples below the blank contamination action level? If yes, U-flag positive sample results <5x associated blank concentration (10x for common blank contaminants – phthalates)			✓	Blank contamination does not exist.	
14. Is a field duplicate associated with this Job?	✓			FM0160K-CSD (680-87496-62) is a field duplicate of FM0160K-CS (680-87496-61)	
15. Was precision deemed acceptable as defined by the project plans?	✓			Refer to **Attachment B** (Field Duplicate Evaluation)	
16. Were DFTPP ion abundance criteria (i.e., Table 3 of SW-846 8270C) met? If no, professional judgment may be applied to determine to what extent the data may be utilized.	✓			Alternate tuning criteria were used by the laboratory (i.e., EPA Method 525.2). All ion abundance criteria were met per EPA Method 525.2.	
17. Were samples analyzed within 12 hours of the DFTPP tune? If no, professional judgment may be applied to determine to what extent the data may be utilized.	✓				
18. Were initial and continuing calibration standards analyzed at the proper frequency for each instrument? • Ensure that a minimum of five standards are used for the initial calibration. If no, use professional judgment to determine the effect on the data and note in the reviewer narrative. • An initial calibration is to be associated with each sample analysis. • A continuing calibration standard is to be analyzed for every 12 hours of sample analysis per instrument.	✓			• Instrument ID: BSMA5973 • Initial Calibration: 02/22/2013 • ICV: 02/22/2013 @ 12:48 • CCV: 02/25/2013 @ 14:59 • Instrument ID: BSMD5973 • Initial Calibration: 01/07/2013 • ICV: 01/07/2013 @ 13:20 • CCV: 02/21/2013 @ 11:57	
19. Were calibration results within laboratory/project specifications? • ICAL (Criteria: ≤15 mean %RSD with individual CCC %RSD ≤30 (≤50% for poor performers), OR r≥0.995, OR		✓		ICV of 02/22/2013 @ 12:48, instrument BSMA5973: 2-Methylnaphthalene @22.1 %D (Lab: ≤35, Project: ≤20). Positive bias is indicated by the CCV percent difference; therefore, J-flag detected results in associated samples[3].	J

[3] Associated sample(s): 680-87496-61 through -76

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
$r^2 \geq 0.99$, and RRF ≥ 0.050 (≥ 0.010 for poor performers)): o If %RSD>15 (>50% for poor performers), or r <0.995, or r^2 <0.995, then J-flag positive results and UJ-flag non-detects o If mean RRF <0.050 (<0.010 for poor performers), then J-flag positive results and R-flag non-detects • ICV and CCV (Criteria: $\leq$20%D ($\leq$50% for poor performers) and RF $\geq$0.050 ($\geq$0.010 for poor performers)): o If %D>20 (>50% for poor performers), then J-flag positive results and UJ-flag non-detects o If RF <0.050 (<0.010 for poor performers), then UJ-flag non-detected semivolatile target compounds					
20. Was a LCS prepared for each batch and matrix?	✓				
21. Were LCS recoveries within lab control limits? If no, J-flag positive results when %R >Upper Control Limit (UCL) and J/R-flag results when %R <Lower Control Limit (LCL).	✓				
22. Were LCS/LCSD RPD within lab specifications? If no, J-flag positive results and UJ-flag non-detects			✓	LCS Only	
23. Was a MS/MSD pair extracted at the proper frequency (one per 20 samples per batch)?	✓				
24. Is the MS/MSD parent sample a project-specific sample?	✓			• Prep Batch 134699: 680-87496-61 (FM0160K-CS), MS/MSD • Prep Batch 134677: 680-87496-48 (CV0971BBB-CS), MS/MSD. Lab sample 680-87496-48 is a project-specific sample (CV0971BBB -CS) that was selected by TestAmerica for the PAH MS and MSD analyses, and the results were reported under Job ID 680-87496-3.	
25. Were MS/MSD recoveries within laboratory/project specifications? *Only QC results for project samples that are reported under this Job ID are evaluated.* • If the native sample concentration > 4x spiking level, then an evaluation of interference is not possible. • If either MS or MSD recovery meets control limits, qualification of data is not warranted. • MS and MSD %R<10: J and R Flag positive and ND		✓		FM0160K-CS (680-87496-61): Benzo[a]pyrene @ 42 and 55 %R (49-130). Qualification of data not required[4].	

[4] The recovery of either the MS or MSD met control limits.

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
results, respectively • MS and MSD %R >10 and <LCL: J-Flag positive and UJ-flag non-detect results • MS and MSD R% >UCL (or 140): J-Flag positive results					
26. Were laboratory criteria met for precision during the MS/MSD analysis? *Only QC results for project samples that are reported under this Job ID are evaluated.* • If the native sample concentration > 4x spiking level, then an evaluation of interference is not possible. • If %RPD > UCL, J-flag positive result and UJ-flag non-detect result	✓				
27. Were surrogate recoveries within lab/project specifications? • If %R for 1 Acid or BN surrogates <10, then J-flag positive and R-flag non-detect associated sample results • If 2 or more Acid or BN %R >UCL, then J-flag positive results • If 2 or more Acid or BN %R ≥10%, but <LCL, then J-flag positive results and UJ-flag non-detect results • If 2 or more Acid or BN , with 1 %R >UCL and 1 %R ≥10%, but <LCL, then J-flag positive results and UJ-flag non-detect results	✓				
28. Were internal standard (IS) results within lab/project specifications? • If IS area counts are less than 50% of the midpoint calibration standard, then J-flag positive and UJ-flag non-detect associated sample results • If IS area counts are greater than 100% of the midpoint calibration standard, then J-flag positive results • If extremely low area counts are reported or performance exhibits a major abrupt drop-off, then a severe loss of sensitivity is indicated, J-flag positive and R-flag non-detect results • If retention time of sample's internal standard is not within 30 seconds of the associated calibration standard, R-flag associated data. • The chromatographic profile for that sample must be examined to determine if any false positives or negatives exists. For shifts of large magnitude, the reviewer may	✓				

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
consider partial or total rejection of the data for that sample fraction. Positive results need not be qualified as R, if mass spectral criteria are met.					
29. Were lab comments included in report?	✓			Refer to **Attachment C** (Case Narrative)	
Comments: The data validation was conducted in accordance with the *Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama, Revision 1* (OTIE, October 2012). The data review process was modeled after the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Methods Data Review* (EPA, October 1999) and *USEPA CLP NFG for Low Concentration Organic Methods Data Review* (EPA, June 2001). Sample results have been qualified based on the results of the data review process (**Attachment D**). Criteria for acceptability of data were based upon available site information, analytical method requirements, guidance documents, and professional judgment.					

DV Flag Definitions:

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
R The sample results are unusable. The analyte may or may not be present in the sample.
U The analyte was analyzed for, but was not detected above the associated level; blank contamination may exist.
UJ The analyte was not detected above the limit, and the limit is approximate and may be inaccurate or imprecise.

ATTACHMENT A

SAMPLE SUMMARY

Sample Summary

Client: Oneida Total Integrated Enterprises LLC
Project/Site: 35th Avenue Superfund Site

TestAmerica Job ID: 680-87496-4
SDG: 68087496-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-87496-61	FM0160K-CS	Solid	02/13/13 16:09	02/15/13 09:42
680-87496-62	FM0160K-CSD	Solid	02/13/13 16:11	02/15/13 09:42
680-87496-63	FM0160L-CS	Solid	02/13/13 16:15	02/15/13 09:42
680-87496-64	FM0161A-CS	Solid	02/13/13 16:30	02/15/13 09:42
680-87496-65	FM0161B-CS	Solid	02/13/13 16:38	02/15/13 09:42
680-87496-66	FM0161C-CS	Solid	02/13/13 16:45	02/15/13 09:42
680-87496-67	FM0161D-CS	Solid	02/13/13 16:50	02/15/13 09:42
680-87496-68	FM0161AB-GS	Solid	02/13/13 16:35	02/15/13 09:42
680-87496-69	FM0161AC-GS	Solid	02/13/13 16:45	02/15/13 09:42
680-87496-70	Unamed Tributary Bank-A	Solid	02/13/13 14:35	02/15/13 09:42
680-87496-71	Unamed Tributary Grab-A	Solid	02/13/13 13:40	02/15/13 09:42
680-87496-72	Unamed Tributary SD-A	Solid	02/13/13 14:30	02/15/13 09:42
680-87496-73	Unamed Tributary Bank-B	Solid	02/13/13 13:40	02/15/13 09:42
680-87496-74	Unamed Tributary Grab-B	Solid	02/13/13 13:50	02/15/13 09:42
680-87496-75	Unamed Tributary SD-B	Solid	02/13/13 14:00	02/15/13 09:42
680-87496-76	Unamed Tributary SD-C	Solid	02/13/13 13:30	02/15/13 09:42

ATTACHMENT B

FIELD DUPLICATE EVALUATION

Evaluation of Field Duplicate Results **Attachment B**

Analyte	FM0160K-CS 680-87496-61		RL	680-87496-62 680-86746-20		RL	Unit	Avg. RLx5	RPD	Absolute difference	2x Avg RL	Action
Acenaphthylene	6.1	J	41	7.4	J	42	µg/kg	207.5	NA	1.3	83	None, absolute difference ≤ 2x Avg RL
Anthracene	10		8.6	13		8.9	µg/kg	43.75	NA	3	17.5	None, absolute difference ≤ 2x Avg RL
Benzo(a)anthracene	45		8.2	55		8.5	µg/kg	41.75	20	NA	NA	None, RPD ≤ 50%
Benzo(a)pyrene	27		11	35		11	µg/kg	55	NA	8	22	None, absolute difference ≤ 2x Avg RL
Benzo(b)fluoranthene	43		13	56		13	µg/kg	65	NA	13	26	None, absolute difference ≤ 2x Avg RL
Benzo(g,h,i)perylene	28		21	41		21	µg/kg	105	NA	13	42	None, absolute difference ≤ 2x Avg RL
Benzo(k)fluoranthene	11		8.2	21		8.5	µg/kg	41.75	NA	10	16.7	None, absolute difference ≤ 2x Avg RL
Chrysene	43		9.2	52		9.5	µg/kg	46.75	NA	9	18.7	None, absolute difference ≤ 2x Avg RL
Dibenzo(a,h)anthracene	11	J	21	18	J	21	µg/kg	105	NA	7	42	None, absolute difference ≤ 2x Avg RL
Fluoranthene	44		21	53		21	µg/kg	105	NA	9	42	None, absolute difference ≤ 2x Avg RL
Indeno(1,2,3-cd)pyrene	24		21	33		21	µg/kg	105	NA	9	42	None, absolute difference ≤ 2x Avg RL
1-Methylnaphthalene	22	J	41	33	J	42	µg/kg	207.5	NA	11	83	None, absolute difference ≤ 2x Avg RL
2-Methylnaphthalene	24	J	41	40	J	42	µg/kg	207.5	NA	16	83	None, absolute difference ≤ 2x Avg RL
Naphthalene	36	J	41	47		42	µg/kg	207.5	NA	11	83	None, absolute difference ≤ 2x Avg RL
Phenanthrene	37		8.2	48		8.5	µg/kg	41.75	NA	11	16.7	None, absolute difference ≤ 2x Avg RL
Pyrene	49		21	60		21	µg/kg	105	NA	11	42	None, absolute difference ≤ 2x Avg RL

Note: If the analyte was not detected, then the cell was left blank.

µg/kg - micrograms per kilogram
NA - Not applicable
RL - Reporting limit
RPD - Relative percent difference

Precision is based on either the absolute difference between sample results or RPD. If the sample results are less than or equal to 5x's the RL, then precision is based on the absolute difference between duplicate results. If sample results >5x's RL, then precision is evaluated using RPD. J-Flag sample results whenever the absolute difference is greater than the RL (2x for soils) or the RPD >20% (50% for soil). Table above presents the results for detected analytes only.

ATTACHMENT C

CASE NARRATIVE

Job ID: 680-87496-4

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Oneida Total Integrated Enterprises LLC

Project: 35th Avenue Superfund Site

Report Number: 680-87496-4

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 02/15/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 5.2º C and 5.8º C.

SEMIVOLATILE ORGANIC COMPOUNDS BY GCMS - LOW LEVEL

Samples FM0160K-CS (680-87496-61), FM0160K-CSD (680-87496-62), FM0160L-CS (680-87496-63), FM0161A-CS (680-87496-64), FM0161B-CS (680-87496-65), FM0161C-CS (680-87496-66), FM0161D-CS (680-87496-67), FM0161AB-GS (680-87496-68), FM0161AC-GS (680-87496-69), Unamed Tributary Bank-A (680-87496-70), Unamed Tributary Grab-A (680-87496-71), Unamed Tributary SD-A (680-87496-72), Unamed Tributary Bank-B (680-87496-73), Unamed Tributary Grab-B (680-87496-74), Unamed Tributary SD-B (680-87496-75) and Unamed Tributary SD-C (680-87496-76) were analyzed for Semivolatile Organic Compounds by GCMS - Low Level in accordance with EPA SW-846 Method 8270C. The samples were prepared on 02/20/2013 and 02/21/2013 and analyzed on 02/22/2013 and 02/26/2013.

Sample FM0161C-CS (680-87496-66)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Benzo[a]pyrene recovered outside the recovery criteria low for the MS of sample FM0160K-CS (680-87496-61) in batch 660-134771.

Benzo[b]fluoranthene, Benzo[k]fluoranthene, Fluoranthene and Pyrene recovered outside the recovery criteria high for the MS of sample 680-87496-48 in batch 660-134722.

No other difficulties were encountered during the Semivolatile Organic Compounds by GCMS - Low Level analyses.

All other quality control parameters were within the acceptance limits.

ATTACHMENT D

QUALIFIED SAMPLE RESULTS

Client Sample ID: FM0160K-CS

Lab Sample ID: 680-87496-61

Date Collected: 02/13/13 16:09
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 95.6

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	100	U	100	21	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Acenaphthylene	**6.1**	**J**	41	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Anthracene	**10**		8.6	4.3	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Benzo[a]anthracene	**45**		8.2	4.0	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Benzo[a]pyrene	**27**	~~J~~	11	5.3	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Benzo[b]fluoranthene	**43**		13	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Benzo[g,h,i]perylene	**28**		21	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Benzo[k]fluoranthene	**11**		8.2	3.7	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Chrysene	**43**		9.2	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Dibenz(a,h)anthracene	**11**	**J**	21	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Fluoranthene	**44**		21	4.1	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Fluorene	21	U	21	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Indeno[1,2,3-cd]pyrene	**24**		21	7.3	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
1-Methylnaphthalene	**22**	**J**	41	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
2-Methylnaphthalene	**24**	~~J~~ J	41	7.3	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Naphthalene	**36**	**J**	41	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Phenanthrene	**37**		8.2	4.0	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1
Pyrene	**49**		21	3.8	ug/Kg	☼	02/21/13 09:55	02/22/13 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*64*		*30 - 130*	*02/21/13 09:55*	*02/22/13 17:10*	*1*

Client Sample ID: FM0160K-CSD

Lab Sample ID: 680-87496-62

Date Collected: 02/13/13 16:11
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 94.6

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	110	U	110	21	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Acenaphthylene	**7.4**	**J**	42	5.3	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Anthracene	**13**		8.9	4.4	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Benzo[a]anthracene	**55**		8.5	4.1	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Benzo[a]pyrene	**35**		11	5.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Benzo[b]fluoranthene	**56**		13	6.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Benzo[g,h,i]perylene	**41**		21	4.7	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Benzo[k]fluoranthene	**21**		8.5	3.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Chrysene	**52**		9.5	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Dibenz(a,h)anthracene	**18**	**J**	21	4.3	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Fluoranthene	**53**		21	4.2	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Fluorene	21	U	21	4.3	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Indeno[1,2,3-cd]pyrene	**33**		21	7.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
1-Methylnaphthalene	**33**	**J**	42	4.7	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
2-Methylnaphthalene	**40**	~~J~~ J	42	7.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Naphthalene	**47**		42	4.7	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Phenanthrene	**48**		8.5	4.1	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1
Pyrene	**60**		21	3.9	ug/Kg	☼	02/20/13 15:19	02/22/13 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*30 - 130*	*02/20/13 15:19*	*02/22/13 15:39*	*1*

Client Sample ID: FM0160L-CS

Lab Sample ID: 680-87496-63

Date Collected: 02/13/13 16:15
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 91.3

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	110	U	110	22	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Acenaphthylene	**6.1**	**J**	44	5.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Anthracene	**13**		9.2	4.6	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Benzo[a]anthracene	**48**		8.8	4.3	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Benzo[a]pyrene	**33**		11	5.7	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Benzo[b]fluoranthene	**53**		13	6.7	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Benzo[g,h,i]perylene	**42**		22	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Benzo[k]fluoranthene	**16**		8.8	3.9	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Chrysene	**57**		9.9	4.9	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Dibenz(a,h)anthracene	**14**	**J**	22	4.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Fluoranthene	**54**		22	4.4	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Fluorene	**5.8**	**J**	22	4.5	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Indeno[1,2,3-cd]pyrene	**30**		22	7.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
1-Methylnaphthalene	**43**	**J**	44	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
2-Methylnaphthalene	**57**	J	44	7.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Naphthalene	**71**		44	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Phenanthrene	**69**		8.8	4.3	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1
Pyrene	**57**		22	4.1	ug/Kg	☼	02/20/13 15:19	02/22/13 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*30 - 130*	*02/20/13 15:19*	*02/22/13 15:55*	*1*

Client Sample ID: FM0161A-CS

Lab Sample ID: 680-87496-64

Date Collected: 02/13/13 16:30
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 80.6

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	120	U	120	25	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Acenaphthylene	49	U	49	6.2	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Anthracene	10	U	10	5.2	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Benzo[a]anthracene	**33**		9.9	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Benzo[a]pyrene	**17**		13	6.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Benzo[b]fluoranthene	**27**		15	7.5	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Benzo[g,h,i]perylene	**23**	**J**	25	5.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Benzo[k]fluoranthene	**10**		9.9	4.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Chrysene	**21**		11	5.5	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Dibenz(a,h)anthracene	**8.4**	**J**	25	5.1	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Fluoranthene	**25**		25	4.9	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Fluorene	25	U	25	5.1	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Indeno[1,2,3-cd]pyrene	**19**	**J**	25	8.8	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
1-Methylnaphthalene	**7.4**	**J**	49	5.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
2-Methylnaphthalene	**9.4**	~~J~~ J	49	8.8	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Naphthalene	**16**	**J**	49	5.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Phenanthrene	**21**		9.9	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1
Pyrene	**29**		25	4.6	ug/Kg	☼	02/20/13 15:19	02/22/13 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*66*		*30 - 130*	*02/20/13 15:19*	*02/22/13 16:09*	*1*

Client Sample ID: FM0161B-CS

Lab Sample ID: 680-87496-65

Date Collected: 02/13/13 16:38
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 81.9

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	120	U	120	24	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Acenaphthylene	48	U	48	6.0	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Anthracene	**6.3**	**J**	10	5.0	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Benzo[a]anthracene	**29**		9.6	4.7	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Benzo[a]pyrene	**18**		12	6.2	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Benzo[b]fluoranthene	**26**		15	7.3	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Benzo[g,h,i]perylene	**20**	**J**	24	5.3	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Benzo[k]fluoranthene	**15**		9.6	4.3	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Chrysene	**28**		11	5.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Dibenz(a,h)anthracene	**8.6**	**J**	24	4.9	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Fluoranthene	**30**		24	4.8	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Fluorene	24	U	24	4.9	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Indeno[1,2,3-cd]pyrene	**23**	**J**	24	8.5	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
1-Methylnaphthalene	**15**	**J**	48	5.3	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
2-Methylnaphthalene	**23**	**J**	48	8.5	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Naphthalene	**25**	**J**	48	5.3	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Phenanthrene	**28**		9.6	4.7	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1
Pyrene	**34**		24	4.4	ug/Kg	☼	02/20/13 15:19	02/22/13 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*30 - 130*	*02/20/13 15:19*	*02/22/13 16:25*	*1*

Client Sample ID: FM0161C-CS

Lab Sample ID: 680-87496-66

Date Collected: 02/13/13 16:45
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 92.9

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	430	U	430	86	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Acenaphthylene	170	U	170	21	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Anthracene	**20**	**J**	36	18	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Benzo[a]anthracene	**110**		34	17	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Benzo[a]pyrene	**57**		45	22	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Benzo[b]fluoranthene	**64**		52	26	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Benzo[g,h,i]perylene	**50**	**J**	86	19	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Benzo[k]fluoranthene	**32**	**J**	34	15	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Chrysene	**53**		39	19	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Dibenz(a,h)anthracene	**19**	**J**	86	18	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Fluoranthene	**77**	**J**	86	17	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Fluorene	86	U	86	18	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Indeno[1,2,3-cd]pyrene	**39**	**J**	86	30	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
1-Methylnaphthalene	**26**	**J**	170	19	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
2-Methylnaphthalene	**42**	**J**	170	30	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Naphthalene	**44**	**J**	170	19	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Phenanthrene	**77**		34	17	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4
Pyrene	**74**	**J**	86	16	ug/Kg	☼	02/21/13 09:55	02/22/13 17:55	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*30 - 130*	*02/21/13 09:55*	*02/22/13 17:55*	*4*

Client Sample ID: FM0161D-CS

Lab Sample ID: 680-87496-67

Date Collected: 02/13/13 16:50
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 88.6

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	110	U	110	23	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Acenaphthylene	45	U	45	5.7	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Anthracene	**11**		9.5	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Benzo[a]anthracene	**32**		9.0	4.4	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Benzo[a]pyrene	**20**		12	5.9	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Benzo[b]fluoranthene	**27**		14	6.9	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Benzo[g,h,i]perylene	**17**	**J**	23	5.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Benzo[k]fluoranthene	**8.9**	**J**	9.0	4.1	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Chrysene	**37**		10	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Dibenz(a,h)anthracene	**7.3**	**J**	23	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Fluoranthene	**38**		23	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Fluorene	23	U	23	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Indeno[1,2,3-cd]pyrene	**14**	**J**	23	8.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
1-Methylnaphthalene	**10**	**J**	45	5.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
2-Methylnaphthalene	**17**	**J**	45	8.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Naphthalene	**19**	**J**	45	5.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Phenanthrene	**31**		9.0	4.4	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1
Pyrene	**39**		23	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*51*		*30 - 130*	*02/21/13 09:55*	*02/22/13 18:10*	*1*

Client Sample ID: FM0161AB-GS

Lab Sample ID: 680-87496-68

Date Collected: 02/13/13 16:35
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 79.3

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	120	U	120	25	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Acenaphthylene	**7.9**	**J**	50	6.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Anthracene	**15**		10	5.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Benzo[a]anthracene	**61**		10	4.9	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Benzo[a]pyrene	**38**		13	6.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Benzo[b]fluoranthene	**55**		15	7.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Benzo[g,h,i]perylene	**39**		25	5.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Benzo[k]fluoranthene	**24**		10	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Chrysene	**56**		11	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Dibenz(a,h)anthracene	**15**	**J**	25	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Fluoranthene	**55**		25	5.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Fluorene	25	U	25	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Indeno[1,2,3-cd]pyrene	**31**		25	8.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
1-Methylnaphthalene	**28**	**J**	50	5.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
2-Methylnaphthalene	**31**	**J**	50	8.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Naphthalene	**36**	**J**	50	5.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Phenanthrene	**52**		10	4.9	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1
Pyrene	**58**		25	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*71*		*30 - 130*	*02/21/13 09:55*	*02/22/13 18:26*	*1*

Client Sample ID: FM0161AC-GS

Lab Sample ID: 680-87496-69

Date Collected: 02/13/13 16:45
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 93.5

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	110	U	110	21	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Acenaphthylene	**7.0**	**J**	43	5.3	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Anthracene	**13**		9.0	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Benzo[a]anthracene	**46**		8.6	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Benzo[a]pyrene	**32**		11	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Benzo[b]fluoranthene	**48**		13	6.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Benzo[g,h,i]perylene	**36**		21	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Benzo[k]fluoranthene	**19**		8.6	3.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Chrysene	**61**		9.6	4.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Dibenz(a,h)anthracene	**12**	**J**	21	4.4	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Fluoranthene	**51**		21	4.3	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Fluorene	21	U	21	4.4	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Indeno[1,2,3-cd]pyrene	**25**		21	7.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
1-Methylnaphthalene	**26**	**J**	43	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
2-Methylnaphthalene	**38**	~~J~~ J	43	7.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Naphthalene	**39**	**J**	43	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Phenanthrene	**54**		8.6	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1
Pyrene	**50**		21	4.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*60*		*30 - 130*	*02/21/13 09:55*	*02/22/13 18:41*	*1*

Client Sample ID: Unamed Tributary Bank-A

Lab Sample ID: 680-87496-70

Date Collected: 02/13/13 14:35
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 79.4

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	120	U	120	25	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Acenaphthylene	**93**		50	6.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Anthracene	**49**		10	5.2	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Benzo[a]anthracene	**170**		9.9	4.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Benzo[a]pyrene	**160**		13	6.4	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Benzo[b]fluoranthene	**200**		15	7.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Benzo[g,h,i]perylene	**140**		25	5.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Benzo[k]fluoranthene	**100**		9.9	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Chrysene	**160**		11	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Dibenz(a,h)anthracene	**56**		25	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Fluoranthene	**150**		25	5.0	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Fluorene	**8.0**	**J**	25	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Indeno[1,2,3-cd]pyrene	**210**		25	8.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
1-Methylnaphthalene	**6.7**	**J**	50	5.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
2-Methylnaphthalene	**12**	~~J~~ J	50	8.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Naphthalene	**13**	**J**	50	5.5	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Phenanthrene	**41**		9.9	4.8	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1
Pyrene	**200**		25	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*63*		*30 - 130*	*02/21/13 09:55*	*02/22/13 18:55*	*1*

Client Sample ID: Unamed Tributary Grab-A

Lab Sample ID: 680-87496-71

Date Collected: 02/13/13 13:40
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 68.4

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	140	U	140	28	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Acenaphthylene	**36**	**J**	57	7.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Anthracene	**53**		12	6.0	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Benzo[a]anthracene	**200**		11	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Benzo[a]pyrene	**180**		15	7.4	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Benzo[b]fluoranthene	**240**		17	8.7	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Benzo[g,h,i]perylene	**150**		28	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Benzo[k]fluoranthene	**86**		11	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Chrysene	**210**		13	6.4	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Dibenz(a,h)anthracene	**45**		28	5.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Fluoranthene	**250**		28	5.7	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Fluorene	**15**	**J**	28	5.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Indeno[1,2,3-cd]pyrene	**140**		28	10	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
1-Methylnaphthalene	**50**	**J**	57	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
2-Methylnaphthalene	**63**	J	57	10	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Naphthalene	**88**		57	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Phenanthrene	**170**		11	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1
Pyrene	**260**		28	5.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*59*		*30 - 130*	*02/21/13 09:55*	*02/22/13 19:11*	*1*

Client Sample ID: Unamed Tributary SD-A

Lab Sample ID: 680-87496-72

Date Collected: 02/13/13 14:30
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 90.0

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**38**	**J**	110	22	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Acenaphthylene	**480**		44	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Anthracene	**360**		9.3	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Benzo[a]anthracene	**1400**		8.9	4.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Benzo[a]pyrene	**1300**		12	5.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Benzo[b]fluoranthene	**2000**		14	6.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Benzo[g,h,i]perylene	**910**		22	4.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Benzo[k]fluoranthene	**520**		8.9	4.0	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Chrysene	**1300**		10	5.0	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Dibenz(a,h)anthracene	**300**		22	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Fluoranthene	**2200**		22	4.4	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Fluorene	**48**		22	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Indeno[1,2,3-cd]pyrene	**930**		22	7.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
1-Methylnaphthalene	**73**		44	4.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
2-Methylnaphthalene	**100**	J	44	7.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Naphthalene	**140**		44	4.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Phenanthrene	**540**		8.9	4.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1
Pyrene	**2100**		22	4.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*48*		*30 - 130*	*02/21/13 09:55*	*02/22/13 19:26*	*1*

Client Sample ID: Unamed Tributary Bank-B

Lab Sample ID: 680-87496-73

Date Collected: 02/13/13 13:40
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 83.6

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	120	U	120	23	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Acenaphthylene	**44**	**J**	46	5.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Anthracene	**46**		9.7	4.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Benzo[a]anthracene	**200**		9.3	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Benzo[a]pyrene	**160**		12	6.0	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Benzo[b]fluoranthene	**210**		14	7.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Benzo[g,h,i]perylene	**130**		23	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Benzo[k]fluoranthene	**100**		9.3	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Chrysene	**180**		10	5.2	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Dibenz(a,h)anthracene	**41**		23	4.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Fluoranthene	**230**		23	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Fluorene	**7.4**	**J**	23	4.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Indeno[1,2,3-cd]pyrene	**130**		23	8.2	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
1-Methylnaphthalene	**30**	**J**	46	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
2-Methylnaphthalene	**45**	**J**	46	8.2	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Naphthalene	**48**		46	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Phenanthrene	**120**		9.3	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1
Pyrene	**250**		23	4.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*64*		*30 - 130*	*02/21/13 09:55*	*02/22/13 19:41*	*1*

Client Sample ID: Unamed Tributary Grab-B

Lab Sample ID: 680-87496-74

Date Collected: 02/13/13 13:50
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 67.5

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	140	U	140	29	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Acenaphthylene	**41**	**J**	58	7.2	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Anthracene	**68**		12	6.0	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Benzo[a]anthracene	**180**		12	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Benzo[a]pyrene	**170**		15	7.5	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Benzo[b]fluoranthene	**240**		18	8.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Benzo[g,h,i]perylene	**140**		29	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Benzo[k]fluoranthene	**110**		12	5.2	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Chrysene	**250**		13	6.5	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Dibenz(a,h)anthracene	**44**		29	5.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Fluoranthene	**340**		29	5.8	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Fluorene	**17**	**J**	29	5.9	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Indeno[1,2,3-cd]pyrene	**150**		29	10	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
1-Methylnaphthalene	**66**		58	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
2-Methylnaphthalene	**89**	**J**	58	10	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Naphthalene	**120**		58	6.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Phenanthrene	**230**		12	5.6	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1
Pyrene	**320**		29	5.3	ug/Kg	☼	02/21/13 09:55	02/22/13 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*54*		*30 - 130*	*02/21/13 09:55*	*02/22/13 19:56*	*1*

Client Sample ID: Unamed Tributary SD-B

Lab Sample ID: 680-87496-75

Date Collected: 02/13/13 14:00
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 85.2

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	120	U	120	23	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Acenaphthylene	87		46	5.8	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Anthracene	110		9.7	4.8	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Benzo[a]anthracene	340		9.2	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Benzo[a]pyrene	290		12	6.0	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Benzo[b]fluoranthene	390		14	7.0	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Benzo[g,h,i]perylene	310		23	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Benzo[k]fluoranthene	120		9.2	4.2	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Chrysene	290		10	5.2	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Dibenz(a,h)anthracene	73		23	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Fluoranthene	400		23	4.6	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Fluorene	25		23	4.7	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Indeno[1,2,3-cd]pyrene	200		23	8.2	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
1-Methylnaphthalene	51		46	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
2-Methylnaphthalene	80	J	46	8.2	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Naphthalene	120		46	5.1	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Phenanthrene	210		9.2	4.5	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1
Pyrene	420		23	4.3	ug/Kg	☼	02/21/13 09:55	02/22/13 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*33*		*30 - 130*	*02/21/13 09:55*	*02/22/13 20:11*	*1*

Client Sample ID: Unamed Tributary SD-C

Lab Sample ID: 680-87496-76

Date Collected: 02/13/13 13:30
Matrix: Solid
Date Received: 02/15/13 09:42
Percent Solids: 70.3

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	140	U	140	28	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Acenaphthylene	39	J	57	7.1	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Anthracene	50		12	5.9	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Benzo[a]anthracene	150		11	5.5	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Benzo[a]pyrene	130		15	7.4	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Benzo[b]fluoranthene	170		17	8.6	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Benzo[g,h,i]perylene	96		28	6.2	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Benzo[k]fluoranthene	89		11	5.1	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Chrysene	160		13	6.4	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Dibenz(a,h)anthracene	32		28	5.8	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Fluoranthene	250		28	5.7	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Fluorene	16	J	28	5.8	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Indeno[1,2,3-cd]pyrene	87		28	10	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
1-Methylnaphthalene	28	J	57	6.2	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
2-Methylnaphthalene	40	J J	57	10	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Naphthalene	68		57	6.2	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Phenanthrene	110		11	5.5	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1
Pyrene	240		28	5.2	ug/Kg	☼	02/21/13 09:55	02/26/13 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*34*		*30 - 130*	*02/21/13 09:55*	*02/26/13 01:47*	*1*